200W Compact Low Power Amplifier

for Satellite Communications



The VZC-6962E2

200 Watt TWT Low Power Amplifier high efficiency in a compact package.

Compact

Provides 200 watts of power in a 3 rack unit package, digital ready, for wideband, single- and multi-carrier satellite service in the 5.850-6.650 GHz frequency band. Ideal for transportable and fixed earth station applications where space and prime power are at a premium.

Efficient

Employs a high efficiency dual-depressed collector helix traveling wave tube backed by many years of field-proven experience in airborne and military applications.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated computer interface. Digital metering, pin diode attenuation and optional integrated linearizer for improved intermodulation performance.

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

Easy to Maintain

Modular design and built-in fault diagnostic capability with convenient and clearly visible indicators behind front panel door for easy maintainability in the field.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes sixteen regional factory Service Centers.



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OPTIONS:

- Remote Control Panel
- Integral Linearizer
- Redundant and Power Combined Subsystems
- Extended Frequency (5.850 to 7.075 GHz, Model Number VZC-6962EB)
- External Receive Band Reject Filter (Increases loss by a minimum of 65 dB, up to 4.8 GHz)

SPECIFICATIONS, VZC-6962E2 Electrical

TWT Model Number VTC-6265M3 **Frequency** 5.850 to 6.650 GHz

Output Power

TWT 200 W min. (53.01 dBm) Flange 175 W min. (52.43 dBm)

Bandwidth 800 MHz

Gain 70 dB min. at rated power output;

75 dB min. at small signal

RF Level Adjust Range 0 to 20 dB

Gain Stability ± 0.25 dB/24hr max. (at constant drive and temp.)

Small Signal Gain Slope ±0.02 dB/MHz max.

Small Signal Gain Variation 0.6 dB pk-pk across any 40 MHz band; (max.) 2.5 dB pk-pk across the 800 MHz band

Input VSWR 1.3:1 max.

Load VSWR 2.0:1 max. operational; any value for

1.3:1 max.

operation without damage

Residual AM -50 dBc below 10 kHz

-20[1.3 +log F(kHz)] dBc, 10 kHz to 500 kHz

-85 dBc above 500 kHz

Phase Noise

Output VSWR

IESS Phase Noise Profile -6 dBc
AC Fundamental -36 dBc
Sum of All Spurs -47 dBc

AM/PM Conversion 2.0°/dB max. for a single carrier at

8 dB below rated power

Harmonic Output -60 dBc at rated power, second and third

harmonics

Noise and Spurious <-130 dBW/4 kHz from 3.4 to 4.2 GHz (at rated gain) <-65 dBW/4 kHz from 4.2 to 12.0 GHz

<-110 dBW/4 kHz from 12.0 to 40.0 GHz

Noise Figure 10 dB max.

Intermodulation -24 dBc max. with two equal carriers

at total output power 7 dB (4 dB with optional integral linearizer) below rated

single-carrier output

Group Delay 0.01 ns/MHz linear max. (in any 40 MHz band) 0.001 ns/MHz² parabolic max.

 $0.5 \ \text{ns} \ \text{pk-pk} \ \text{ripple} \ \text{max}.$

Electrical (continued)

Primary Power $100 - 240 \text{ VAC} \pm 10\%$,

single phase 47-63 Hz

Power Consumption 0.85 kVA typ.

1.0 kVA max.

Power Factor 0.95 min.

Environmental (Operating)

Ambient Temperature -10° to +50°C operating

-40° to +70°C non-operating

Relative Humidity 95% non-condensing

Altitude 10,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating;

40.000 ft., non-operating

Shock and Vibration Designed for normal transportation

environment per Section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms (1/2 sine pulse) in non-operating

condition.

Acoustic Noise 65 dBA @ 3 ft. from amplifier

Mechanical

Cooling (TWT) Forced air with integral blower

Rear air intake & exhaust

RF Input Connection Type N female

RF Output Connection CPR 137 waveguide flange, grooved, threaded UNF 2B 10-32

RF Output Monitor Type N female

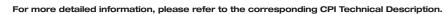
Dimensions (W x H x D) 19 x 5.25 x 24 in. (483 x 133 x 610 mm)

Weight 70 lbs (31.8 kg) max.









Note: Specifications may change without notice as a result of additional data or product refinement.

